

Proposed Modifications to the Small Off-Road Engine Emission Credits Regulations

Staff Presentation
Air Resources Board
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Outline

- Background
- Proposed Modifications
- Recommendation

Background

Examples of Equipment with Small Off-Road Engines

Less than 80 cc*



80 to 225 cc



Greater than
225 cc

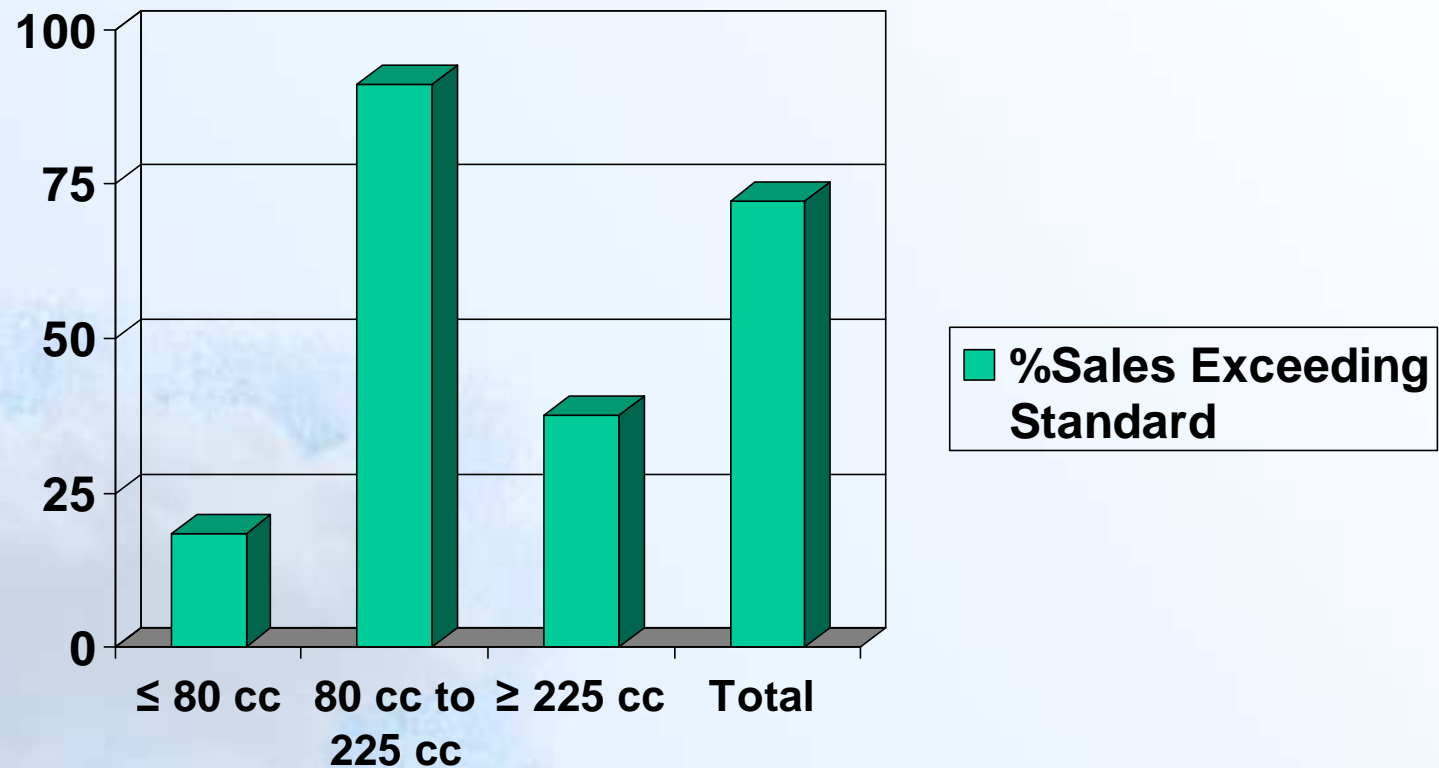
*cubic centimeters

Background

Tier 3 Emission Standards Reduce Emission by ~ 35%

Engine Displacement	Model Year	HC+NOX Reduction from Tier 2 Standards
≤ 80 cc	2005 and subsequent	30%
> 80 cc - < 225 cc	2007 and subsequent	38%
≥ 225 cc	2008 and subsequent	34%

Most 2008 SORE Model Year Engines Use Credits to Exceed the Tier 3 Emission Standards



Background

Certification and Production Emission Credits

- Intended to incentivize clean technology and provide compliance flexibility
- Certification emission credits derived from the difference between the family emission level (FEL) and the emission standards
- Production emission credits derived from the difference between production line testing results and FEL
 - Unique to SORE regulation

Background

Emission Credits Have Not Functioned as Envisioned

- Credits (certification and production) remain after associated equipment is no longer in service
- Production credits are not verifiable and enforceable reductions

Excessive Emission Credits Pose a Threat to The SIP

- 10,265 tons of HC+NO_x credits are banked
- Jeopardize SIP attainment

Proposed Changes Emissions Credits

- Limit certification emission credit lifetime to 5 years (life of equipment)
- Discontinue production credits
- Sunset existing production credits after one year

Proposed Changes Introduce Zero Emission Equipment Credits

- Encourage advanced emission control technology
- Allow only professional level performance
- Allow usage for up to 40% above the emission standard
- Will work with industry to provide more specificity

The Proposal Would Assure The Previously Adopted Tier 3 Benefits Are Achieved

Tier 3 Exhaust Emission Reductions

Year	HC (tons/day)	NOx (tons/day)
2010	18.5	3.2
2020	42.0	7.5

Conclusion and Recommendation

Staff's proposal would

- Assure Tier 3 benefit not lost
- Continue to encourage development of cleaner technology
- Continue manufacturer compliance flexibility

Staff recommends adoption